

Amendments to Claims

A full set of claims is provided, with changes shown by underlining additions and striking-through deletions in accordance with the U.S. Patent and Trademark Office "Amendments in a Revised Format" Notice.

1-38 (Cancelled)

39. (Previously Amended) A grid for a battery comprising:

a network bordered by at least one frame element, one of the frame elements having a current collector lug;

the network comprising a plurality of spaced apart wire elements, each wire element having opposed ends, each opposed end being joined to one of a plurality of nodes to define a plurality of open spaces;

a lead alloy coated on substantially all surfaces of the network;

at least a portion of the wire elements having a first transverse cross-section taken at a position intermediate the opposed ends of the wire element and a second transverse cross-section taken at one of the opposed ends of the wire element.

40. (Previously Amended) The grid of Claim 39 wherein the second transverse cross-section is substantially rectangular.

41. (Currently Amended) The grid of Claim 39 wherein the first transverse cross-section has a shape selected from the group consisting of diamond, oval, rhomboid, hexagon, and octagon.

42. (Currently Amended) The grid of ~~claim~~ Claim 39 wherein the lead alloy coating is porous.

43. (Previously Added) The grid of Claim 39 wherein the lead alloy comprises a lead-tin alloy.

44. (Currently Amended) The grid of Claim ~~42~~ 43 wherein the lead-tin alloy comprises about 90 weight percent to about 99 weight percent lead and about 1 weight percent to about 10 weight percent tin.

45. (Currently Amended) The grid of Claim ~~43~~ 44 wherein the lead-tin alloy further includes antimony.

46. (Currently Amended) The grid of Claim ~~42~~ 43 wherein the lead-tin alloy comprises about 80 weight percent to about 98 weight percent lead, about 1 weight percent to about 10 weight percent tin, and about 1 weight percent to about 10 weight percent antimony.

47. (Currently Amended) The grid of Claim ~~45~~ 46 wherein the coating has a melting point less than about 620 degrees Fahrenheit.

48. (Currently Amended) The grid of Claim ~~43~~ 44 wherein the network comprises a lead-calcium alloy.

49. (Currently Amended) The grid of Claim ~~47~~ 48 wherein the lead-calcium alloy comprises about 0.06 weight percent to about 0.07 weight percent calcium.

50. (Currently Amended) The grid of Claim ~~48~~ 49 wherein the lead-calcium alloy comprises at least about 0.8 weight percent tin.

51. (Currently Amended) The grid of Claim ~~49~~ 50 wherein the lead-calcium alloy comprises about 1.2 weight percent to about 1.5 weight percent tin.

52. (Currently Amended) The grid of Claim ~~50~~ 51 wherein the lead-calcium alloy comprises tin in a ratio to calcium of greater than about 12:1.

53. (Currently Amended) The grid of Claim ~~51~~ 52 wherein the lead-calcium alloy comprises at least about 0 to about 0.02 weight percent silver.

54. (Currently Amended) A grid for a battery comprising:

a network bordered by at least one frame element comprising:

a plurality of spaced apart wires having a plurality of surfaces, at least one of the plurality of spaced apart wires having a substantially rectangular cross-section at a first location and a non-rectangular cross-section at a second location;

a plurality of apertures ~~stamped~~ provided between the plurality of spaced apart wires;

a coating comprising a lead alloy on the plurality of surfaces of the plurality of spaced apart wires;

wherein the coating is configured to couple an active material to the network.

55. (Currently Amended) The grid of Claim ~~53~~ 54 wherein the plurality of spaced apart wires include a plurality of planar surfaces.

56. (Currently Amended) The grid of Claim ~~54~~ 55 wherein the plurality of apertures are defined by surfaces that are transverse to the plurality of planar surfaces.

57. (Currently Amended) The grid of Claim ~~55~~ 56 wherein the coating is disposed on the surfaces that are transverse to the plurality of planar surfaces.

58. (Currently Amended) The grid of Claim ~~53~~ 54 wherein the lead alloy comprises a lead-tin alloy comprising about 90 weight percent to about 99 weight percent lead and about 1 weight percent to about 10 weight percent tin.

59. (Currently Amended) The grid of Claim ~~57~~ 58 wherein the lead-tin alloy further includes antimony.

60. (Currently Amended) The grid of Claim ~~53~~ 54 wherein the lead alloy comprises a lead-tin alloy comprising about 80 weight percent to about 98 weight percent lead, about 1 weight percent to about 10 weight percent tin, and about 1 weight percent to about 10 weight percent antimony.

61. (Currently Amended) The grid of Claim ~~59~~ 60 wherein the coating has a melting point less than about 620 degrees Fahrenheit.

62. (Currently Amended) The grid of Claim ~~59~~ 60 wherein the at least one frame element includes a current collector lug.

63. (Currently Amended) The grid of Claim ~~59~~ 60 wherein the active material comprises a paste.

64. (Currently Amended) The grid of Claim 59 54 wherein the wire includes a first transverse cross-section taken at a position intermediate an end of the wire and a second transverse cross-section taken at the end of the wire cross-section at the second location is one of a diamond, an oval, a rhomboid, a hexagon, and an octagon.

65. (Currently Amended) A grid for a battery comprising:  
means for supporting an active material and having a plurality of exposed surfaces;

a layer provided over ~~means for coating~~ the means for supporting the active material;

wherein the ~~means for coating~~ layer substantially covers the plurality of exposed surfaces;

wherein the means for supporting an active material includes at least one wire element having a generally rectangular cross-sectional shape at a first location and a non-rectangular cross-sectional shape at a second location.

66. (Currently Amended) The grid of Claim 64 65 wherein the means for supporting the active material comprises a network bordered by at least one frame element.

67. (Currently Amended) The grid of Claim ~~65~~ 66 wherein the means for supporting the active material comprises a plurality of spaced apart wires having a plurality of surfaces.

68. (Currently Amended) The grid of Claim ~~66~~ 67 wherein the means for supporting the active material comprises a plurality of apertures stamped between the plurality of spaced apart wires.

69. (Currently Amended) The grid of Claim ~~67~~ 68 wherein the ~~means for coating comprises a coating comprising~~ layer comprises a lead alloy ~~on the plurality of surfaces of the a plurality of spaced apart wires.~~

70. (Currently Amended) The grid of Claim ~~68~~ 69 wherein the plurality of spaced apart wires include a plurality of planar surfaces.

71. (Currently Amended) The grid of Claim ~~69~~ 70 wherein the plurality of apertures are defined by surfaces that are transverse to the plurality of planar surfaces.

72. (Currently Amended) The grid of Claim ~~70~~ 71 wherein the ~~coating~~ layer is disposed on the surfaces that are transverse to the plurality of planar surfaces.

73. (Currently Amended) The grid of Claim ~~64~~ 65 wherein ~~means for coating~~ the layer comprises a lead-tin alloy comprising about 90 weight percent to about 99 weight percent lead and about 1 weight percent to about 10 weight percent tin.

74. (Currently Amended) The grid of Claim ~~72~~ 73 wherein the lead-tin alloy further includes antimony.

75. (Currently Amended) The grid of Claim ~~68~~ 69 wherein the ~~coating~~ layer comprises about 80 weight percent to about 98 weight percent lead, about 1 weight percent to about 10 weight percent tin, and about 1 weight percent to about 10 weight percent antimony.

76. (Currently Amended) The grid of Claim ~~74~~ 75 wherein the ~~coating~~ layer has a melting point less than about 620 degrees Fahrenheit.